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ABSTRACT

The purpose of this manual is to assist the librarian and audiovisual director in setting up an audio-tape collection. It contains information needed to initiate, organize, and develop a collection - sources and uses of taped programs, depositories, types of tape, cataloging and classification procedures, filing rules, promotion methods, equipment, manufacturers, handling and storage of tapes, and advantages of audio-tape in the teaching process. The manual deals primarily with monaural tapes containing the spoken, word rather than stereo music recordings. (Related documents are LI004289 through LI004292.) (Author/DH)

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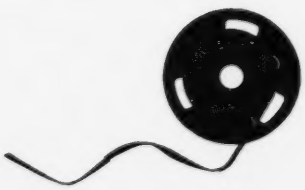
THE AUDIO-TAPE COLLECTION

(A Library Manual on Sources, Processing, and Organization)



LI 004 293

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DALE E. SHAFFER

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PREFACE

This manual has been prepared to assist the librarian and audio-visual director in setting up an audio-tape collection. The librarian who, for the first time, is faced with the task of developing a collection of non-print materials, can save considerable time and money by observing the procedures followed by other librarians. Audio-visual personnel, not always having had course work in cataloging procedures, can pick up important pointers on the processing and organizing of resources, prevent costly mistakes, and learn of the reasons for following certain library procedures.

Included in the manual is basic information needed for starting an audio-tape collection - sources, tape depositories, types of tape, cataloging and classification procedures, simplified rules for filing catalog cards, promotion of tapes, types of equipment, manufacturers, handling and storing of tapes, uses of tapes, and the advantages of audio-tapes in the teaching process. By following instructions given, the librarian can very quickly build an inexpensive collection of valuable programs that add new content to his resources. Tapes are available and suitable for all types of libraries - school, college, university, public, and special libraries. This manual is primarily concerned with monaural tapes containing the spoken work, rather than stereo tapes of music recordings.

My hope is that this booklet will stimulate librarians to incorporate audio-tapes into their collections. The information will have served its purpose if it saves the librarian time and money in setting up a well-organized collection that meets the needs of his patrons.

Dale E. Shaffer
Library Consultant

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A basic problem of all educators is how to motivate large numbers of students toward independent inquiry. The thousands of taped programs now available speak directly to this problem. They form the basis of a new type of interdisciplinary learning experience - flexible, convenient, interesting, effective - that motivates students and enables them to seek knowledge whenever and wherever they choose.

Students learn from example. The teacher represents an example of a person thinking. An audio-tape can represent the same thing.

USE OF AUDIO-TAPES IN THE TEACHING PROCESS

Use of audio-tapes, or any other audio-visual media, does not guarantee good teaching. Such media are valuable only if teachers use them to promote clearly-defined instructional goals. They are meant to be used within the framework of a specific instructional plan for each unit of study, following a careful analysis of course objectives and student needs.

We are rapidly approaching the time when use of tapes as instructional material for classes will be as habitual as opening a book. Teaching methods have changed with the advent of the cassette and availability of taped programs. Listening centers of some sort are now standard facilities in most schools. Dial access equipment can be found in many new libraries. (Dial access is an electronic retrieval system involving a bank of taped programs, making it possible for the student to dial and listen to recorded programs at various locations throughout the building or campus.)

Advantages of Audio-Tape. The availability and versatility of the magnetic tape recorder make it one of the most valuable of all teaching aids. Its effectiveness is limited only by the resourcefulness

of the teacher.

Described below are several unique advantages offered by audio-tape.

1. Extends Classroom Teaching -
Through the use of taped programs, the teacher can extend his teaching beyond the confines of his own personal knowledge. This is an important need as human knowledge grows at such a rapid pace and the requirements of education become more diverse. Tapes provide an inexpensive means of bringing guest lecturers into the classroom. Many schools and colleges cannot afford the fees necessary to pay noted authorities for speaking engagements. Tapes make available the valuable content of such lectures. The tape collection is, indeed, an inexpensive way of expanding a school's instructional materials program.

2. Motivates Students -
The dimension of sound lends power to the learning process, especially where the sound is from the lips of authorities. Tape gives an immediacy to the information presented. Students can be "turned on" by sounds that excite them to move and to explore. Responding to a good taped program is an exercise in finding out, and finding out is growing. A story masterfully told increases enthusiasm for reading, and encourages a greater appreciation of literature.

3. Develops Student Skills -
An exciting listening experience stimulates the desire to listen, and develops listening skills. A student's vocabulary is strengthened by the example of words, in context, expressively used.

In the field of literature, tapes can help students to understand and anticipate the dramatic flow of stories. By listening to a story prior to reading it, the student gains background thoughts for meaningful application.

4. Offers Flexibility -
Audio-tapes are excellent library resources for individual study. They offer students the freedom to learn on their own and enjoy doing it. Teachers will find them suitable for use with large or small groups, with

individuals, or for homework assignment. A teacher of art appreciation in one college tapes his daily lectures and places them, along with accompanying slides, in the library for student use.

5. Surpasses Quality of Record - Tape has several advantages over the phonograph record. It is of higher fidelity and capable of playing back even the tiniest shading of sound. It can be played 10,000 times, does not become scratchy, and can circulate without breakage.

Describing the above advantages is another way of saying that the audio-tape has unique characteristics which enable it to perform certain teaching functions even better than the teacher himself. Being a teaching aid, it should be used for those unique functions and nothing more.

Listening to Tapes. Someone once observed that we have two ears and only one tongue in order that we may hear more and speak less. Communication in its vital sense means communion, a sharing of ideas and feelings in a mood of mutuality. The word comes from the Latin "communico" (to share). Thus, communication is the act of sharing or imparting a share of anything.

The art of listening is a very important ingredient in the learning process. Studies show that people absorb only about 30 per cent of what they hear. A student will spend roughly 70 per cent of his normal day in communicating with other people, and at least 45 per cent of that time is devoted to listening.

Unfortunately, few students have been trained to listen. Early education concentrates on reading and writing. These, of course, must be taught because they do not develop naturally. Likewise, the practice of speaking properly comes with schooling. But the teaching of proper listening habits is neglected. Audio-tapes have

much to contribute in this area.

The key to poor listening, as well as effective listening, lies in the fact that people can think much faster than they can talk. Most Americans speak at a rate of about 125 words per minute. But we are able to think at least four times that fast. This is the reason for some audio-tapes being recorded at accelerated speeds. It results in thoughts being communicated much faster.

To benefit most from a tape, students should be encouraged to listen with a purpose. The following are suggestions:

1. Constantly ANALYZE what is being said.
2. SCREEN out the irrelevant.
3. CATEGORIZE the important points.
4. COMPARE what is said with what is already known.
5. LOOK AHEAD to see where the speaker is going.
6. Listen to what is NOT SAID.

Use of a tape in the classroom requires that the teacher follow certain basic guidelines:

1. PREVIEW each tape before using it in the classroom.
2. Select programs with SPECIFIC OBJECTIVES in mind. Use only pertinent parts of the tape, even if it requires editing.
3. Encourage the development of CRITICAL LISTENING SKILLS on the part of students.
4. Have EQUIPMENT SET UP and ready to use in the classroom.
5. Follow up the tape with a SEMINAR DISCUSSION of the contents.
6. REPLAY parts of the tape when necessary.

As an important part of the lesson plan, the tape should, of course, be in the possession of the teacher. Permanent copies, however, should also be cataloged and housed in the library.

SOURCES OF AUDIO-TAPES

Audio-tapes are designed to supplement printed material, build inquiry skills, and develop personal interests. They are available in every subject area, from travel tours to foreign language drills. Many have lasting, almost universal, value and will never become obsolete. Some of the best programs are in the fields of literature, poetry, Shakespeare, drama, history, Civil War, psychology, religion, reading, art, music, ecology, Black history, philosophy, science, technology, political science, world cultures, law, social science, economics, anthropology, and foreign languages. Most of the academic tapes have been produced and/or made available by universities, museums, and radio stations. They feature distinguished lecturers, scientists, educators, statesmen, discussion, debates, seminars, documentaries, recitals, dramatizations, and interviews. Sixty minutes of taped program will cost a minimum of $8.00. A large selection of excellent programs is available from Tapes for Teachers, 437 Jennings Ave., Salem, Ohio 44460.

An important reference book useful in the acquisition of audio-tapes is titled INDEX TO EDUCATIONAL AUDIO TAPES (National Information Center for Educational Media, University Park, Los Angeles, Calif. 90007...2nd ed., $36.50). This volume lists and describes the content of 20,000 audio-tapes. Information includes annotation, series, time length, speed, number of tracks, producer, distributor, and level.

Other helpful publications include:

1. AUDIOVISUAL MARKET PLACE (Bowker).
   Lists dealers of audio-visual materials.

2. A REFERENCE GUIDE TO AUDIOVISUAL INFORMATION, by James L. Limbacher (Bowker, $14.95).
   Gives annotated reference works, periodicals, and AV terms.

3. LJ/SLJ PREVIEWS (LIBRARY JOURNAL).
   Periodically publishes a directory of audio-visual producers and distributors (see p. 46, Sept. 1972 issue).

4. AUDIO VISUAL SOURCE DIRECTORY (MPE).
   Published semi-annually by Motion Picture Enterprises, Tarrytown, NY 10591...$2.50. Provides sources for obtaining AV materials, equipment, and services.

These are but a few of the many reference publications in the field of audio-visual materials. Other tools may be found in GUIDE TO REFERENCE BOOKS, by C. M. Winchell (ALA).

Commercial Sources. In recent years, there has been a rapid increase in the production of audio-tapes. Sources now number in the hundreds. Given below is a partial listing of major producers of audio-tapes in the academic area. These are producers of tapes containing mainly the spoken word rather than music. Catalogs are available upon request.

American Assoc. for the Advancement of Science
1515 Massachusetts Ave., N.W.
Washington, D.C. 20005

Ampex Stereo Tapes
2201 Lunt Ave.
Elk Grove, Ill. 60007

Audio Book Co.
301 Pasadena Ave.
S. Pasadena, Calif. 91030

Audio-Visual Services
Tapes Service
Kent State Univ.
Kent, Ohio 44240

CMS Records
14 Warren St.
NY, NY 10007

Center for Cassette Studies
8110 Webb Ave.
N. Hollywood, Calif.91605

Center for the Study of
Democratic Institutions
Box 4068
Santa Barbara, Calif. 93103

Charles Burke (Library Tapes)
Box 404
Westport, Conn.

Charles E. Merrill Pub. Co.
1300 Alum Creek Dr.
Columbus, Ohio 43216

Doubleday & Co.
School & Library Div.
Garden City, L.I., NY 11530

Educators Progress Service
Randolph, Wisconsin 53956
(FREE TAPES, SCRIPTS, AND
SUBSCRIPTIONS)

Everett/Edwards, Inc.
133 South Pedan Ave.
Deland, Fla. 32720

Zweig Associates
20800 Beach Blvd.
Huntington Beach, Calif.
92648

German Consulate (Tape Loan)
1444 Illuminating Blvd.
55 Public Square
Cleveland, Ohio 44113

Great Plains Instructional TV
Library
University of Nebraska
Lincoln, Neb. 68508

Gregg Division
McGraw-Hill Book Co.
330 W. 42nd St.
NY, NY 10036

Harrison Tapes
143 W. 20th St.
NY, NY 10011

Houghton Mifflin Co.
53 W. 43rd St.
NY, NY 10036

Imperial International Learning
Box 548
Kankakee, Ill. 60901

Ingram Book Co.
AV Products Div.
Box 3712
Nashville, Tenn. 37217

A. C. McClurg & Co.
2121 Landmeir Rd.
Elk Grove Village, Ill. 60007

McGraw-Hill Sound Seminar
330 W. 42nd St.
NY, NY 10036

Ntl. Education Assoc.
1201 Sixteenth St., N.W.
Washington, D.C. 20036

Ntl. Instructional TV
Box A
Bloomington, Ind. 47401

Ohio Historical Society
Columbus, Ohio 43211
(Copies of radio programs)

Pacific Tape Library
2217 Shattuck Ave.
Berkeley, Calif. 94704

Peters International
600 Eighth Ave.
NY, NY 10018

Tapes Unlimited
13001 Puritan Ave.
Detroit, Mich. 48227

Universal Learning Corp.
200 Park Ave. South
NY, NY 10003

University Microfilms
300 N. Zeeb Rd.
Ann Arbor, Mich. 48106

Washington Tapes
5540 Connecticut Ave., N.W.
Washington, D.C. 20015

Western Tape
Box 69
2273 Old Middlefield Way
Mountain View, Calif. 94040

Librarians interested in musical tapes should refer to a monthly publication called the SCHWANN RECORD AND TAPE GUIDE (137 Newbury St., Boston, Mass. 02116). The SCHWANN SUPPLEMENTARY CATALOG FOR SPOKEN TAPES appears in the Spring and Fall. A subscription may be obtained through any large distributor of tapes and records; e.g., Chambers Record Corp., 97 Chambers St., NY, NY 10007; National Record Plan, 28 W. 25th St., NY, NY 10010; Sam Goody, Inc., 46-35 - 54th Rd., Maspeth, NY 11378.

Many of the large music recording companies now produce stereo tapes. Catalogs may be obtained directly from Columbia, Decca, Capital, RCA, Angel, Camden, Caedmon, United Artists, GRT, Ampex, and Apple.

Tape Depositories. Various states have established tape depositories to serve the schools within a given area. Some depositories serve only institutions within the state or within a certain regional area. Others offer their services on a nationwide basis. Most depositories charge for dubbing. Some require the use of their own tape and will not accept blank tape sent by the customer.

On a national basis, perhaps the most-used depository is the National Center for Audio Tapes (Stadium Bldg., Univ. of Colorado, Boulder, Colorado 80302). Copies of tapes are ordered and purchased at a cost based on length of program; e.g., $2.35 for a 15-minute program. The Center will not accept blank tape.

A less expensive source is the Texas Education Agency (Resource Center, 201 E. 11th St., Austin, Texas 78701). This Center offers copies of its tapes to all schools regardless of location. It

accepts blank tape and does not charge for dubbing. The only cost to the customer is for postage. Thousands of excellent programs are available.

Other depositories include the following:

Audio-Visual Center
Univ. of Connecticut
Storrs, Conn. 06268
(Serves New Eng. only)

Iowa Tapes for Teaching
Audiovisual Center
Univ. of Iowa
Iowa City, Iowa 52240
(Dubbing fee)

Audio-Visual Education Ctr.
Univ. of Michigan
416 Fourth St.
Ann Arbor, Mich. 48103
(Dubbing fee)

Bureau of AV Education
Univ. of North Carolina
111 Abernethy Hall
Chapel Hill, N. Car. 27514

AV Instruction
Div. of Continuing Ed.
Gill Coliseum 133
Corvallis, Oregon 97331
(Dubbing fee)

Audio-video Duplication Ctr.
Bureau of Instructional Svs.
Dept. of Public Instruction
Rm. 321, Education Bldg.
Box 911
Harrisburg, Pa. 17126
(Serves Pa. only; no fee)

Reigner Recording Library
AV Center
Union Theological Seminary
Richmond, Va. 23227
(Religious tapes loaned)

Bureau of AV Instruction
Brigham Young Univ.
Provo, Utah 84601

Bureau of Teaching Materials
Commonwealth of Virginia
State Board of Education
Richmond, Va. 23216
(Serves Virginia only)

All of the depositories above will provide catalogs which describe the taped programs they make available.

Producing Audio-Tapes and Copyright. The practice of taping lectures is becoming a common practice in many colleges. Selected teachers agree to record all or part of certain courses, and place the tapes in the library or a lab for students to use at their leisure. This practice is excellent because it allows the student to replay a lecture for purposes of clarification, or to listen to one he has missed.

Teachers favor the idea for many reasons - lectures are available in the library for students to use practically any time, including days the teacher is absent; the taped lectures supplement the student's classroom notes; a new teacher can review the methods and content used in teaching the course; students can make copies of the tapes and listen to them during free time at home; the teacher is able to review and continually improve his lectures; and finally, students who fall behind in classwork can recoup and avoid dropping the course.

The fact is, complete courses - especially lower level courses which are largely content-oriented - can be captured on tape for repeated use by interested library patrons. This is in line with the major function of the academic library to offer rich resources which students can tap at will. Lectures can be as rich as books so why not make them available?

Copyrighted tapes by commercial firms should not be duplicated without approval of the producer. A copyright is a form of protection given by the law of the United States (Title 17, U.S. Code) to the authors of literary, dramatic, musical, artistic, and other intellectual works. The owner of a copyright is granted by law certain exclusive rights in his work such as (1) the right to print, reprint and copy the work; (2) the right to sell or distribute copies of the work; (3) the right to transform or revise the work; and (4) the right to perform and record the work.

The copyright law lists 13 broad classes of works in which copyright may be claimed. One class is "lectures or similar productions prepared for oral delivery". This includes scripts of <u>unpublished</u> works prepared in the first instance for oral delivery,

such as lectures, sermons, addresses, monologs, panel discussions, and variety programs prepared for radio or television. Scripts must consist of the actual text of works to be presented orally.

"Unpublished work" generally refers to one for which copies have not been sold, placed on sale, or made available to the public. "Published work" refers to that which has been made available to the public in some way, usually by the sale or public distribution of copies.

One category of material which is generally not eligible for statutory copyright protection is "sound recordings and performances recorded on them". This allows for taped programs received from depositories to be duplicated without approval. Broadcasting restrictions, however, may be placed on certain programs and compliance is required.

The rights in a work are permanently lost unless all published copies bear a notice of copyright. When a work has been published without notice of copyright it falls into public domain and becomes public property. After that happens, it serves no purpose to add the notice to copies of the work, and doing so may be illegal.

PHYSICAL ASPECTS OF AUDIO-TAPE

The two important physical aspects of recording tape are the backing and the coating. The backing supplies the physical strength and most commonly is either cellulose acetate or polyester (Mylar). Acetate is economical, provides flawless sound reproduction, and produces excellent frequency response. Acetate and polyvinyl chloride (PVC) backings are dissimilar, but both are less costly than polyester.

Polyester and "Mylar" are essentually similar in composition. "Mylar" is the DuPont registered trade name. Polyester (Mylar) is considered the finest base material for recording tape because of its extra strength and dimensionally stable characteristics. The extra strength of polyester-based tapes allows for its use in 0.5 mil tapes. This backing is preferred for long time storage because it is uneffected by heat, humidity, or other factors that cause shrinkage or swelling. It is usually more expensive than acetate or PVC based tapes. The base material, however, does not necessarily have any effect upon the quality of the surface coating or frequency response.

The coating of magnetic oxide particles is what actually does the recording. Recording characteristics are determined primarily by this coating. Audio-tape manufacturers provide different basic oxide coatings for the three different types of tape, namely:

1. Standard all-purpose recording tape.
2. Low print tape (signal is transferred from layer to layer).
3. Extra length tape (long play on the same reel size).

"Tensilized" is a term referring to the process of pre-stretching tape to eliminate the potential problem of stretching on fast starts and stops. All tape base types can be tensilized with the exception of acetate.

Tapes vary in thickness. The thickness of a tape cross section in most commonly used tapes is 1.5, 1.0, or 0.5 mils (1.0 mil is .001" thick). The thicker the tape, the stronger it is. However, polyester (Mylar) is actually many times stronger than acetate; its strength being required for the 1.0 and 0.5 mil tapes. Thickness has

no relation to tape quality per se, except that the thinnest tapes are more susceptible to "print through".

Reel or Cassette? The advantages of using open reel tape are several; namely, (1) tape which is 1.5 mil thick is very strong and long-lasting; (2) tape purchased in open reel is less expensive than in cassette; (3) reproduction quality of open reel tape is excellent; and (4) editing, splicing, and repairing are easily done on the open reel. For these reasons, master tapes of recorded programs are usually kept on open reels.

Open reel tape is ordinarily recorded at either 3 3/4 ips (inches per second) or 7½ ips. The slower speed is satisfactory for the spoken word, but not for music. Playing time for various speeds and reels is shown in the following chart:

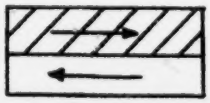
PLAYING TIME FOR VARIOUS TAPE SPEEDS AND REEL SIZES

(Single track)

Tape Thickness	*Reel Size (inches)*	*Tape Length (feet)*	*Tape Speed* 3¾	7½ *i.p.s.*
1½ mil	3	150	7½ min.	3¾ min.
1½ mil	4	300	15 min.	7½ min.
1½ mil	5	600	30 min.	15 min.
1½ mil	7	1200	60 min.	30 min.
1 mil	3	225	11¼ min.	5⅝ min.
1 mil	4	450	22½ min.	11¼ min.
1 mil	5	900	45 min.	22½ min.
1 mil	7	1800	90 min.	45 min.
½ mil	3	300	15 min.	7½ min.
½ mil	4	600	30 min.	15 min.
½ mil	5	1800	90 min.	45 min.
½ mil	5	1200	60 min.	30 min.
½ mil	7	2400	120 min.	60 min.
½ mil	7	3600	180 min.	90 min.

Track arrangement for the open reel tape depends entirely upon the type of equipment on which the tape will be used. "Twin half-track" is the term used to describe two half-tracks on one tape. One track is recorded along the upper half of the tape. The tape is then turned over, and another track is recorded along the remaining portion of the tape. See the diagrams below for a visual description of the different tracks.

Single half-track



Twin half-track

Quarter track

The cassette is a tape recorded on the loop principle. It is a self-contained unit, enclosed in a sealed plastic case measuring 4" x 2½" x ½". In operation, it needs only to be dropped into the cassette compartment of the player for instant, automatic operation. The speed is 1 7/8 ips. Press a button and 30 to 120 minutes of playing time (interrupted by only one turnover) follows. The cassette contains supply and take-up reels and can be wound forward or backward with the push of a button. Its life is prolonged because the tape itself is not touched by human hands.

Certain advantages have made the cassette very popular during recent years:

1. Simplicity -
   Anyone can operate a cassette player. There is no need for threading of equipment.

2. Inexpensive Equipment -
   Cassette equipment is less costly than reel equipment.

3. Long Life -
Cassettes are very durable. They last a long time.

4. Portability -
This feature makes possible unlimited use of cassettes. They can be used in the classroom, with large groups, small groups, or for individual study. They are very convenient for home study use.

5. Less Storage Space -
Very little space is required for storing a large collection of cassette tapes. Being sealed, they are not damaged by atmospheric conditions.

Many producers of sound filmstrips now offer the customer a choice of either the cassette or record. Because of convenience, the trend is definitely toward use of the cassette.

Handling and Storage of Audio-Tape. One of the major causes of tape distortion is the excessive tension in winding. A thousand odd layers, each adding a minute stress, can add up to a tremendous pressure on tape nearest the hub or center of the plastic reel. If tape is allowed to weave back and forth during winding, distortion will increase. Therefore, an even wind at moderate tension is desirable.

Recorded tape will remain magnetized unless altered by magnetic means. There is no measurable loss of magnetism over a long period of time. Magnetic tape is tough and easy to handle, but it can be damaged and requires a certain amount of care.

Temperature and humidity can affect magnetic tape. For example, low humidity will dry out acetate tape and make it brittle. High temperatures will cause physical distortion and loss of strength. Ideal storage conditions are 70 degrees temperature with 40% to 60% humidity. Extremes of temperature and humidity should be avoided.

Splicing and Editing of Audio-Tape. Splicing is simply the joining together of two sections of tape. A good splice is never heard. It must be strong and lasting, without becoming gummy or sticky. Splicing tape should have a non-running adhesive. Small inexpensive splicing blocks for magnetic tape are available from most electronic parts dealers.

Given below are a few suggestions for producing noise-free splices:

1. Do not use magnetized scissors or razor blades when splicing. Magnetized instruments will cause a "click" or "pop" at the splice.

2. Overlap the two ends of the tape and cut them diagonally at about 45 degrees. A diagonal cut minimizes disturbance at the splice.

3. Join ends together without overlapping them. Apply about ½ inch of splicing tape in a parallel manner to the shiny (uncoated) side of the magnetic tape. Rub splicing tape firmly with fingernail to iron out pockets for positive adhesion. Trim edges of splicing tape if wider than magnetic tape.

Editing involves removing or adding segments to a tape recording. It is done by simply marking cutting points with a grease pencil (on shiny side), cutting and splicing.

ORGANIZING THE AUDIO-TAPE COLLECTION

There are good reasons for organizing audio-tapes as a separate collection, with its own card catalog and classification system. Inter-filing index cards for tapes with cards for books and printed material is not recommended. Audio-tapes are non-book material. They have unique characteristics and a unique function. Their value is not in documented research but rather in the function of

teaching and learning.

Organizing audio-tapes as a separate collection also makes for greater efficiency. Classifying all types of library resources according to the LC or Dewey schemes, disregarding the basic differences between printed and non-book material, is simply not the most efficient manner of organizing a resource center. It unnecessarily complicates both the use and maintenance of the catalog and collection. Different types of resources require different types of classification systems as well as separate card catalogs.

By not using the LC or Dewey schemes (or any numbering system which attempts to classify material by subject, enabling the patron to browse through the collection), the librarian greatly simplifies the job of developing and using the collection. The call number for a tape should be just that - a simple, unique number for the patron to use in calling for a particular tape. It need not reflect subject content.

A simplified classification system means that the task of organizing can be removed from the area of professional cataloging and given to non-professional staff members. Processing work can be done entirely by clerical personnel, and at a considerable saving in time and money. Removing the processing of tapes from the general system of cataloging books will result in a much smoother flow of materials into the hands of patrons.

Cataloging and Classification Procedures. Whether audio-tapes are stored on shelves, in cabinets, drawers, or in racks, the numbering system can be the same. For purposes of this manual we

will assume that both reel tapes in boxes and cassettes are inter-filed together on open shelves. It is unnecessary to physically separate reel tapes from cassettes, although special storage cabinets are available for each type. Separate collections, if used, require the use of two different numbering systems.

The work of processing tapes involves two activities; namely, (1) marking the audio-tape, and (2) preparing and filing catalog cards. Most of the work is clerical and requires only the skill of typing. A step-by-step procedure follows:

1. Assign a Unique Call Number -
   The call number is simply an accession number with the symbol "T" added; e.g., 1-T, 2-T, 3-T, etc. Type call number on label and place on outside spine of box (cover label with magic mending tape).

2. Apply Descriptive Label to Box and Reel -
   Both the box and reel must be labeled with identifying and descriptive information.

   a. Label Inside Reel Box (Top):

   > "The religious pragmatism of John Dewey". Lecture by Philip Phenix. (35 min., one side, 7½ ips)

   b. Label Reel or Cassette:

   > 2-T
   > One side, 35 min., 7½ ips.
   > Jennings Library, Salem, Ohio.

   Cassette:

   > 1-T
   > Both sides, 60 min.
   > Jennings Library, Salem, Ohio.

3. Prepare Container -
This involves:
   a. Stamping library identification on outside of box.
   b. Using a "Received" stamp to indicate date of receipt inside front cover of box, at bottom.
   c. Placing date-due sticker inside front cover of box, at bottom.

4. Prepare Catalog Cards -
Printed LC cards are not available for many audio-tapes. Preparation of cards is very easy with the use of simplified cataloging procedures. The set of cards will consist of a main entry, appropriate added entries, and a shelf-list. Title of taped program is used for the main entry with a hanging indention format. The titles of every program included on the tape should be indicated.

Simple and short key words, selected by the librarian, are to be used for subject headings. Avoid the use of any rigid guide such as Sears' LIST OF SUBJECT HEADINGS or LC SUBJECT HEADINGS. Choose words commonly used by all patrons. Some degree of consistency in subject headings is desirable, but even more important is that the headings be useful ones. Any number of author (performer) added entries can be made.

The tape card catalog, then, is a separate alphabetical, subject-title-performer index to every audio-tape in the library. Cards, rather than the tapes themselves, are arranged by subject. In addition to title, subject, and performer cards, the librarian may prepare a series entry, if necessary. The rule is to prepare sufficient headings to adequately describe the contents of each tape.

Information presented on the main entry card includes (1) call number, (2) title, time length, and performer, (3) name and location of producer, (4) grade level, (5) reel or cassette, (6) number of tracks, (7) speed, (8) references to accompanying material such as filmstrips, teaching manual, etc., and (9) tracing. The shelf-list card is the same as the main entry, with the addition of source, date, and cost information. Tracing need appear only on the main entry card.

Arabic numerals are used in the tracing to indicate subject headings; Roman numerals denote non-subject headings. The following abbreviations are useful for indicating the level of learning:

p = primary	sh = senior high
i = intermediate	col = college
jh = junior high	ad = adult

EXAMPLE (MAIN ENTRY FOR CASSETTE):

1-T Teachings and disciplines of Zen (30 min. lecture by Suzuki Roshi). Buddhism in China (30 min. lecture by Joseph Campbell). Big Sur Recordings, San Rafael, Calif. (col/ad)

Cassette tape, both sides.

1. Religion. 2. Zen. 3. Buddhism. 4. Philosophy. 5. China - Religion. I. Roshi, Suzuki. II. Campbell, Joseph.

EXAMPLE (MAIN ENTRY FOR REEL):

2-T The religious pragmatism of John Dewey (35 min. lecture by Philip Phenix). Reigner Recording Library, Richmond, Va. (col/ad)

Reel tape, one side, 7½ ips.

1. Religion. 2. Dewey, John. I. Phenix, Philip.

NOTE: Only one set of cards is needed for a particular audio-tape. Duplicates are given the same call number with a "c.2" designation added. The notation "c.2, source, date, cost" is added to the shelf-list card. A check-out card for each individual tape reel must be prepared.

EXAMPLE (SUBJECT CARD WITH HEADING IN ALL CAPS OR IN RED):

SPORTS - ART.

3-T Art and sport (22 min.). National Education Assoc., Wash., D.C. (sh/col/ad)

Reel tape with filmstrip no. ___ and pamphlet no. ___, one side, 3 3/4 ips.

EXAMPLE (SERIES CARD):

Once upon a time in Ohio. (Series)

4-T Little Turtle - Miami chieftain.
Dorothy Scudder - Indian captive.

5-T Conspiracy of Pontiac.
Grandmother's Indian story.

6-T Colonel John Johnston - Indian agent.
Henry Howe - Pioneer historian.

EXAMPLE (SHELF-LIST CARD):

(Shelf-List)

7-T Readings from James Joyce's "Finnegan's Wake" (90 min. lecture by Joseph Campbell). Big Sur Recordings, San Rafael, Calif. (col/ad)

Two cassette tapes (pts. 1,2), one side.

pt.1, Big Sur, 2/1/73, $12.00 (one cassette)
pt.2, Big Sur, 2/1/73, $12.00 (one cassette)

5. Type a Check-Out Card -
A check-out card (unique color if possible) is prepared for each tape or cassette. The card can be kept at the Circulation Desk, rather than with the tape, and signed by the patron at the time the tape is checked out. Loan period is ordinarily limited to seven days.

EXAMPLE (CHECK-OUT CARD):

Tape (7-day loan) 2-T The religious pragmatism of John Dewey (35 min. reel).

6. File Cards and Shelve Material -
Cards are properly filed in the public and shelf-list catalogs (see simplified rules given in another section of this manual). Tapes are shelved according to call number.

When audio-tapes are part of a multi-media kit, they should be kept together with the other materials as one unit. Separating tapes simply because a separate collection of tapes exists in the library, is not a valid reason. Let us assume, for example, that a multi-media kit consists of two cassettes, four filmstrips, and four teaching manuals. The kit can be numbered: FS Kit (1)

Each filmstrip and cassette within the kit will be numbered FS Kit (1)A, FS Kit (1)B, FS Kit (1)C, etc. Unique numbers are given each pamphlet manual to correspond with the filmstrip it accompanies;

e.g., Pam. FS Kit (1)A If any item is ever misplaced, it will be identified

as part of FS Kit (1). Total contents of the kit are, of course, described on the main entry and check-out card.

The advantage of this system is the convenience it offers the user. Everything he needs is contained in one box. The disadvantages are that (1) an entire kit can be a costly item to check out in total; (2) the patron may be interested in only certain items within the kit; and (3) housing material in large boxes requires a

considerable amount of space. Separation of items can make for more effective use of a limited amount of space.

There are ways of bringing multi-media materials together other than housing them in one box. Cross reference notations on catalog cards and a series card can direct patrons to all materials in a particular unit. The fact is, grouping of multi-media material by the producer does not necessarily mean that all the items are closely related or dependent upon one another. Organizing resources for use is, in the final sanse, the responsibility of the librarian, not the producer.

SIMPLIFIED RULES FOR FILING CATALOG CARDS

The audio-tape collection requires its own card catalog, located close to the tapes themselves. It is recommended that tape cards not be inter-filed in the main card catalog. Their filing is much easier than the filing of cards for books in the main catalog because key-word headings are brief and without lengthy subdivisions. For that reason, the 15 rules given below are very basic and easy to follow.

1. ALPHABETICAL BY WORD (GENERAL RULE) -
   Arrange cards alphabetically, word by word, alphabetizing letter by letter to the end of each word.
   e.g. Education, Secondary. / Educational research. / Educators. NOT Educational research. / Education, Secondary. / Educators.

2. TITLE CARD (MAIN ENTRY) -
   Title entries are arranged alphabetically, considering each word in turn. The initial article is disregarded, but all other articles and prepositions are to be regarded.

3. DIFFERENT ENTRIES WITH SAME HEADINGS -
   When the same headings occur on different cards, use the line below the heading for alphabetizing.

4. ABBREVIATIONS AND ORGANIZATION INITIALS -
Arrange initials and abbreviations as if spelled out in full (e.g., NEA = National Education Association), except "Mr." and "Mrs." which are filed as they are spelled when used in a title. Spell out in full initials and other abbreviations used for geographical names. A cross reference should be made from the full form whenever necessary.

5. INITIALS OF PERSONS -
Arrange title card headings having initials for authors' names at beginning of alphabetical section (e.g., J.P. Morgan at beginning of j's); i.e., before a word beginning with the same initial. Author initials in added entry should be filed as though spelled out, if possible.

6. APOSTROPHE, ELISIONS, AND CONTRACTIONS -
The apostrophe is disregarded (e.g., Librarian's, Librarians', O'Brien, Who's). Three dots at the end of a title heading are to be regarded as a period. Disregard umlauts and all kinds of accents and diacritical marks in foreign languages.

7. COMPOUND NAMES, HYPHENATED WORDS, PREFIXES -
Arrange compound names and hyphenated words as separate words (e.g., Spanish-American)...see exception under rule #11. Arrange hyphenated words, compounded with prefixes, as one word (e.g., co-education).

8. PREFIXES M' AND Mc -
Names beginning with the prefix M' and Mc are filed as if spelled Mac, because they are so pronounced.

9. SUBDIVISIONS AND INVERTED HEADINGS -
Arrange the subdivisions of a subject alphabetically. Make no distinction between the dash, comma or other punctuation marks (e.g., Art, Ancient; Art - History; Art, Italian).

10. TITLES IN NAMES -
Disregard prefix designations (e.g., Mrs., Sir, Gen., Capt., Dr.) except in title entries.

11. WORD SPELLED TWO WAYS -
When title headings begin with a word that may be spelled in two ways, choose the most popular spelling and file all titles under this form (e.g., labour and labor; audio-visual and audiovisual; photocopy and photo copy). A cross reference should be made from other spellings.

12. De, Von, etc. AS PART OF NAME -
A proper name with a prefix is filed as one word.

13. INITIAL ARTICLES -
Disregard initial articles (a, an, the) for both English and foreign titles.

14. FIGURES IN TITLES -
Alphabetize as if the word were spelled in full (e.g., 1001 would be filed as if it were spelled one thousand one). Titles beginning with a date are filed as they are read (e.g., 1776 would be filed as if it were spelled seventeen seventy-six).

15. ROYAL PERSONAGES WITH SAME NAME -
Kings, queens, princes, princesses, etc. bearing identical names are filed chronologically (e.g., Elizabeth I, Elizabeth II).

PROMOTING THE USE OF AUDIO-TAPES

The value of audio-tapes, like that of all audio-visual materials, can be brought to the attention of teachers, students and library patrons in various ways. The job of promotion requires special effort, however, because the materials themselves require time and special effort to use. In the case of teachers, audio-visual materials require considerable thought as to how such media can be used constructively within a particular course, and what changes in teaching methods will be necessary. Surveys show that only about 18% of college and public school teachers have ever used an audio-tape as a part of the teaching process. This would seem to indicate that the majority of teachers are either not convinced of the value of audio-tape as a teaching tool, or they are unwilling to make the special effort necessary to find and incorporate such media into their lesson plans.

Promoting the use of library resources is a matter of merchandising - showing, discussing, explaining, and getting people to look or listen to specific learning materials. The best way, for

example, to get an English teacher to use an audio-tape is for the librarian to know the content of a particular course, find a quality program that contributes to a segment of that course, and then provide the teacher with a convenient means for listening to the tape. In other words, make a valuable contribution to the course and help the teacher perform his job better and easier.

A published listing of tapes is a worthwhile tool for distributing to patrons. The call number, title of program, speaker, time length, producer, level, and subject field can be given in a three-column format. This amounts to a shelf-listing and provides the patron with an inexpensive reference tool he can keep and use at his leisure. It is a way of advertising and acquainting teachers with new types of learning media.

Another wise practice is to appoint a specialist in non-print materials. One staff member, with interest and enthusiasm in both audio-visual resources and teaching, can do much to increase the circulation of such materials. It is recommended that the staff member be given both the authority and responsibility for developing and promoting "his" collection.

It goes almost without saying that the unattractive library, with an inadequate variety of resources, poorly organized in closed stacks, and understaffed with personnel interested only in the printed word, will have little success in promoting its services. A large number of college and school libraries have, for various reasons, refrained from starting audio-tape collections. Having visited many libraries and resource centers across the country, the author finds that audio-tapes have been neglected as a library item,

and have not received the attention they deserve. Many librarians apparently are not aware of the excellent material available on tape, and the simplicity of developing a collection of such material. Taped lectures by authorities in the field are particularly valuable in supporting the curriculum. They store like books and can circulate just as easily. One example of a secondary school that makes extensive use of tapes is the Huron High School in South Dakota. Cassettes are distributed for about every lesson of almost every course.

Satisfaction of intellectual curiosity in our society requires that resources be abundant, diverse, and of high quality. The marvels of modern technology represent a rich reservoir of resources for listening, viewing, reading, and doing. Yet, education as a whole has not invested these resources to any great extent, or accepted them into partnership. The educational possibilities of modern electronics for producing, storing, retrieving, and distributing information has barely been scratched.

A final word on promotion relates to the obtaining of funds through grants. Initiating and developing an audio-tape collection is an excellent project for justifying a grant from federal or private sources. This manual can help to explain the need for new types of resources and the funds necessary to acquire them. Sources for special-purpose grants can be found in the FOUNDATION DIRECTORY (Russell Sage).

AUDIO-TAPE EQUIPMENT

All equipment requires some form of maintenance. An occasional cleaning of the recording heads, capstan, tape guides and other parts

will assure longest wearing life of both tapes and equipment. Cleaning solvent recommended is either isopropyl alcohol (available at most drug stores) or Freon TF. It should be applied with a clean cotton cloth or cotton-tipped stick.

· Two of the most informative periodicals in the area of new equipment and supplies are SCHOOL PRODUCTS NEWS (614 Superior Ave. West, Cleveland, Ohio 44113) and CURRICULUM PRODUCT REVIEW (Suite 1100, 230 W. Monroe, Chicago, Ill. 60606). Subscriptions are free to librarians and audio-visual directors.

Two excellent reference books in the equipment area are THE AUDIO-VISUAL EQUIPMENT DIRECTORY (Nat. AV Assoc., Fairfax, Va.) and THE AUDIO-VISUAL EQUIPMENT MANUAL (Holt, Rinehart & Winston). Both provide descriptions and illustrations of current models of audio-visual equipment.

Manufacturers of Recording Equipment. There are many producers of tape recorders, players, cassettes, and duplicators. Only a selective listing of the major producers will be given here.

1. Ampex Corp., 401 Broadway, Redwood City, Calif. 10036 (copiers).
2. Audio/Tek, Inc. (copiers).
3. Audiotronics, 7428 Bellaire Ave., North Hollywood, Calif. 91605 (copiers).
4. Avid Corp., 10 Tripps Lane, East Providence, R.I. 02914.
5. Becht Electronics, 3513 Burbank Blvd., Burbank, Calif. 91505.
6. Bell & Howell, 7100 McCormick Rd., Chicago, Ill. 60645.
7. Concord Electronics Corp., 1935 Armacost Ave., Los Angeles, Calif. 90025.
8. Edu-Media, 1513 Sixth St., Santa Monica, Calif. 90401.
9. Hamilton Electronics Corp., 2726 W. Pratt Ave., Chicago, Ill. 60645.
10. Ifonics, Inc., 1723 Cloverfield Blvd., Santa Monica, Calif. 90404 (copiers).
11. Magnetic Video Corp., 23434 Industrial Park Court, Farmington, Mich. 48024 (copiers).

12. Montage Productions, 49 W. 27th St., NY, NY 10001.
13. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood, Calif. 90038.
14. Norelco, 100 E. 42nd St., NY, NY 10017.
15. P/H Electronics, 117 E. Helena St., Dayton, Ohio 45404.
16. Pentagon Industries, 4751 N. Olcott Ave., Chicago, Ill. 60656 (copiers).
17. RCA, Front & Cooper Sts., Camden, NJ 08102.
18. Recordex Corp. (copiers).
19. Rheem-Califone Corp., 5922 Bowercroft St., Los Angeles, Calif. 90016 (copiers).
20. Scanfax Systems Corp., 25 W. 26th St., NY, NY 10010 (copiers).
21. Sony Corp., 47-37 Van Dam St., Long Island City, NY 11101.
22. Superscope, Inc., 8150 Vineland Ave., Sun Valley, Calif. 91353.
23. Telex Communications Div., 9600 Aldrich Ave. South, Minneapolis, Minn. 55420 (copiers).
24. Tandberg of America, P.O. Box 171, 8 Third Ave., Palham, NY 10803.
25. V-M Corp., Educational Systems, Benton Harbor, Mich. 49022 (copiers).
26. Wollensak-Revere, 3-M Co., 2501 Hudson Rd., St. Paul, Minn. 55119.

As a library's audio-tape collection grows, the need finally arises for equipment to duplicate cassettes; i.e., non-commercial tapes. Scanfax Corporation produces a self-serve automatic copier which will make up to five cassette copies in a matter of minutes, and at a cost of approximately six cents each. The unit is capable of serving a library or an entire school system. Special equipment is required for duplicating reel to reel, reel to cassette, or cassette to reel.

Tape Storage Equipment. Equipment for housing audio-tapes may be in the form of cabinets, shelves, racks, chests, or drawers. Listed below are the sources which offer perhaps the largest variety in types of storage equipment.

1. Advance Products Co., 2300 Douglas, Wichita, Kansas 67214.
2. Bradford Products Co., Skokie, Ill. 60076.
3. Demco, Box 1488, Madison, Wisconsin 53701.

4. Esmond Industries, 666 Fifth Ave., NY, NY 10019.
5. Jack C. Coffey Co., Waukegan, Ill. 60085.
6. Neumade Products Corp., Box 568, 720 White Plains Rd., Scarsdale, NY 10583.
7. Scanfax Systems Corp., 25 W. 26th St., NY, NY 10010.
8. Wallach & Associates, 1532 Hillcrest Rd., Cleveland, Ohio 44118.
9. Winsted Corp., 422 S. Seventh St., Minneapolis, Minn. 55415.

For further information on developing an audio-tape collection,

write: Mr. Dale E. Shaffer
Library Consultant
437 Jennings Ave.
Salem, Ohio 44460
Phone: (216) 337-3348

Neither stability nor change has any intrinsic value. The worth of stability is the goodness it preserves; the worth in change is the goodness it brings about.